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CHAPTER 2

The Power of Slogans: The Rhetoric of Network Neutrality

Brett Lunceford

The technological landscape that we inhabit is becoming increasingly complex, yet citizens and government officials are often uninformed concerning the intricacies of these technologies. Ellul (1992) asks, "How can people who are incompetent make important decisions with regard to technique? Here, of course, ordinary citizens are in exactly the same place as the politicians, who are also perfectly incompetent" (p. 43). Without an understanding of how technology works, citizens and government officials are ill-equipped to make rational, well-informed decisions concerning its implementation and governance. This situation can lead to poor policy at best and complete miscarriages of justice at worst. Because of the difficulty in explaining complex technological systems to laypersons, technologies are often reduced to simplistic explanations and slogans. The problem here is that in the case of network neutrality, technical communicators have largely chosen to reinforce such oversimplification by jumping onto one bandwagon or another instead of working to clarify the issues.

This chapter examines the current debate surrounding network neutrality—a situation in which the technical details have been largely ignored and slogans and arguments that appeal to heuristics have come to dominate public perceptions. Despite the complexity of the issues surrounding Internet traffic in international contexts, proponents of network neutrality have centered the debate on the master term of neutrality. Such an argument implies that the issue here is fairness, and herein is the problem. The argument is no longer a technical question; it has become a moral issue bound up with emotion, and Cicero's (1942 version) observation that "men decide far more problems by hate, or love, or lust, or rage, or sorrow, or joy, or hope, or fear, or illusion, or some other inward emotion, than by reality, or authority, or any legal standard, or judicial precedent, or statute" is

just as valid in the modern public sphere as it was in the Roman assembly (p. 325). The technical communicator must serve as a logically grounded counterpoint to the rhetoric of doom and fear that is often prevalent in the public sphere.

For technical communicators, the situation has become one in which it is easy to be led away by flowery speech and seductive metaphors. As a result, technical communicators need to understand how language shapes our perceptions of technologies. After all, network neutrality is a complex issue that encompasses packet management, bandwidth allocation, and the right to manage one's network, rather than simply a black-and-white case of freedom versus oppression. Moreover, one must recognize that the term *technical communicator* encompasses not only traditional roles such as technical writers and editors, but also those who create, market, and distribute technologies and the policies that surround them. In short, anyone who interprets technologies to the public is a technical communicator; including technology scholars, journalists, intellectual property attorneys, inventors, and anyone else who has a vested interest in technology adoption and policy. For the purposes of this chapter, I will proceed with this broad conception of the technical communicator.

The case of network neutrality provides a case study in which to consider how technology issues are rhetorically constructed in the public sphere. These constructions can have severe implications for law and public policy. That is, when public policy is created out of emotion rather than a clear understanding of the technology in question, it is the citizenry as a whole that will lose. As such, the technical communicator plays a vital role in helping society understand technologies and their impact. Moreover, such legislation may also have global consequences, especially in the case of communication technologies that span the globe. For example, in an age of widely available, easy to use digital reproduction, copyright law would mean little without international copyright treaties. This essay examines these issues and then concludes with suggestions for how technical communication professionals can help to clarify debates surrounding technologies and their implications for laypersons, legislators, and legal practitioners.

THE PROBLEM WITH DISTRIBUTED NETWORKS

The Internet, as it exists in the public mind, is a fiction. Even the words we use to describe the Internet portray it as a monolithic entity—*The* Internet. But the Internet is not so much an entity as it is a system of smaller networks that their administrators have chosen to link together, much as the highway system is simply a system of interconnected roads. As a network of networks, the Internet is the epitome of decentralization. This was, of course, by design; when ARPAnet, the precursor to the Internet, was built by ARPA (Advanced Research Project Agency), it was meant to withstand a nuclear attack on the United States (Salus, 1995; Thomas, 2002).

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Yet as with many technological innovations, the Internet comes with many unintentional consequences, not least of which is the difficulty in controlling a network that, by design, resists control. The Internet has given rise to vexing legal and ethical issues, including

- Identity theft (Allison, Schuck, & Lersch, 2005; Eisenstein, 2008; Marshall & Tompsett, 2005; Simpson, 2003)
- Online gambling (Morse, 2007; Whybrow & Reed, 2002)
- Pharmaceutical sales (Binns & Driscoll, 2001; Fox, Ward, & O'Rourke, 2005; Levaggi et al., 2009)
- Hyperlinking (Auld, 2001)
- Pop-up ads (Nosko, Wood, & Desmarais, 2007; Tyacke & Higgins, 2005)
- Auction fraud (Chua & Wareham, 2008; Jenamani, Zhong, & Bhargava, 2007; "US fraud victims," 2007)
- Child pornography and exploitation (Bauserman, 2003; Beech, Elliott, Birgden, & Findlater, 2008; Burke, Sowerbutts, Blundell, & Sherry, 2002; Schell, Martin, Hung, & Rueda, 2007; Williams, 2003)
- Intellectual property piracy (Chiang & Assane, 2008; B. Lunceford & Lunceford, 2008; Peitz & Waelbroeck, 2006; Seay, 2008; Sims, 2003; Yang, 2007)
- Various forms of email fraud (Chua & Warcham, 2008; Edelson, 2003; Ojedokun, 2005; Oriola, 2005).

The Internet allows each and all of these actions to take place on a global scale, and as more nations gain access to the Internet, the scope and scale of these activities will only continue to grow and to globalize. Moreover, these issues lay bare sometimes opposing attitudes held by different nations concerning such issues as

- Privacy (Baumer, Earp, & Poindexter, 2004; Beldad, De Jong, & Steehouder, 2009; Brown & Blevins, 2002; Cheung, 2009; Floridi, 2005; Poindexter, Earp, & Baumer, 2006; Wang & Hong, 2010)
- Freedom of speech (Abbott, 2001; Chin, 1997; Dickerson, 1996; Leets, 2001; Sunstein, 1995; Yang, 2007)
- Sexual morality (Baurmann, 2004; Graupner, 2004a, 2004b; Hofmeister, 2004; Waites, 2005).

Once again, the global nature of the Internet allows for these clashes in values because what may be perfectly acceptable in one country might be against the law in another. As more and more nations become increasingly wired, these clashes are likely to become more frequent. Technical communicators will play

an important role not only in identifying these potential clashes but in mediating the controversies that will inevitably arise.

In essence, these factors reveal a simple but important truth. Because of its decentralized nature, the Internet can no longer be controlled only by those who created it. Rather, the genie is out of the bottle, and the Internet now connects the entire globe. As such, any effort to regulate the Internet by one entity is likely to be thwarted by the efforts of another. For technical communicators, these developments mean that one can no longer resort to simplified discussions of technologies and their impacts. Despite the apparent difficulty of explaining technologies to laypeople, the increasing complexities of technological systems demand complex explanations that accentuate, rather than deny, the nuances of these systems.

The Nature of the Internet

When considering the implications for Internet regulation, we must first begin with the nature of the Internet itself, the code itself. Lessig (1996) notes that "Engineers write the code; the code defines the architecture, and the architectures define what is possible within a certain social space" (p. 1410). According to Lessig,

> Code is an efficient means of regulation. But its perfection makes it something different. One obeys these laws as code not because one should; one obeys these laws as code because one can do nothing else. . . . Law as code is a start to the perfect technology of justice. (p. 1408)

Yet code is not simply a mechanism for control. Those who write the code endow it with certain attributes, based on the values of the creator. As such, the code is also a means of distributing an ideology. Hacktivists especially have noted that the architecture of the Internet allows for a level of direct action even in oppressive governments that would be difficult to attain in the nonvirtual world (Jordan, 2002; Jordan & Taylor, 2004).

What is at stake in the debates concerning network neutrality is the architecture of the Internet itself. Ganley and Allgrove (2006) note that the Internet "was designed as a 'dumb' network" (p. 456). In other words, everything that passed over the network is treated just like anything else—a packet is a packet is a packet, regardless of what that packet contains. However, Ganley and Allgrove explain that routers allow operators "to prioritize or de-prioritize certain packets of data or even drop them from their network altogether" (p. 454). The question, then, is whether network administrators should be allowed to prioritize some packets over others. Network neutrality advocates (e.g., Herman, 2006; Lessig, 2007) argue that the "end-to-end" design of the dumb pipe is essential to maintaining innovation online, while others, such as Hass (2007) argue that the

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Lucas (1988) echoes this sentiment:

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It seems that if technical communicators could provide a technical description of the Internet as it is and has been, the public would be able to more fully recognize the inherent flaws in the arguments of those who have chosen to engage in a kind of historical revisionism to advocate for a "dumb pipe" that never was. However, this would require technical communicators to eschew the metaphor-driven language of the network neutrality debate and instead adopt the language of science. Such a move, however, would require technical communicators to consider ways to make scientific language more accessible to the layperson.

Network Neutrality and the Law

Legal scholars have discussed the legal implications of network neutrality, including specific pieces of legislation (Beard, Ford, Koutsky, & Spiwak, 2006; Burstein & Schneider, 2009; Frieden, 2007; Herman, 2006; Lessig, 2007; S. Lunceford, 2008; Wong & Garrie, 2007; Yoo, 2005a), while others have looked at it from an economic perspective (Fischmann & van Schewick, 2006; Hermalin & Katz, 2007; Shrimali, 2008; Yoo, 2005b). S. Lunceford (2008) argues forcefully that proposals for network neutrality are unsustainable from a networking standpoint. As a legal scholar and a computer scientist, Lunceford lays out both the legal arguments against network neutrality as well as the technical ones based on the architecture of the Internet and networking protocols. Yet, as I have explained elsewhere, the construction of law is, at its heart, a rhetorical concern (B. Lunceford & Lunceford, 2008), so for the remainder of this chapter, I will examine the rhetorical contours of the network neutrality debate in order to consider how this issue is discussed in the public sphere. In this case, we will see that by allowing the network neutrality camp to define the terms that describe the technology, many technical communicators have abdicated their responsibility to help others understand technological systems. Moreover, by allowing a metaphor- and ideology-driven language to define these systems, they have unwittingly helped to define network neutrality as an unquestioned good, despite serious technical flaws. As such, the case of network neutrality serves as a cautionary tale of how language shapes our perceptions of technologies and technological systems.

THE RHETORIC OF NETWORK NEUTRALITY

Rhetorician Thomas Benson (1985) explains, "Rhetoric critics inquire into meaning, not simply in an artifact but also in the pragmatics of that artifact: that is, in how a human being can, or did, or should use that artifact" (p. 204). Lucas (1988) echoes this sentiment:

> The benefit of close textual analysis is that it allows the critic, in essence, to "slow down" the action within the text so as to keep its evolving internal context in sharp focus and to allow more precise explication of its rhetorical artistry. (p. 249)

To that end, I wish to focus on specific terms in the debates surrounding network neutrality, carefully considering how these terms function to invite the observer to understand the issue.

First, we must consider who the players are in the debate. Ganley and Allgrove (2006) observe that "the net neutrality debate is often framed as having just two sides. On one side are the operators. . . . The other side of the debate is more complex and is characterized by an eclectic coalition of content and service providers" (p. 455). Although I agree that the debates surrounding network neutrality have many more participants, for our purposes, we can maintain the illusion of two camps while acknowledging the loss of nuance in the arguments.

Each side maintains a belief in specific key ideals. McGee (1975) writes, "Each political myth presupposes a 'people' who can legislate reality with their collective belief. So long as 'the people' believe basic myths, there is unity and collective identity" (p. 245). The ancient Greeks called this common knowledge *doxa*, and such common sense is often bound up in what Weaver (1953) calls "God" and "Devil" terms. These ideals guide the thoughts and actions of collectives—nations, religions, or social movements—that share a particular ideology. As McGee (1980) observes, "Human beings are 'conditioned,' not directly to belief and behavior, but to a vocabulary of concepts that function as guides, warrants, reasons, or excuses for behavior and belief" (p. 6). In other words, the terms that we use to define objects or phenomena shape the audience's perceptions of them. As such, technical communicators must carefully consider the terms that they use to describe technologies.

Master Terms in the Network Neutrality Debate

The network neutrality camp has skillfully seized the reins of the public argument surrounding network neutrality by defining their cause in such terms as *freedom*, *openness*, and *saving the Internet*. I suggest that these terms function as *ideographs*, or terms that are laden with ideology (McGee, 1980). McGee (1980) notes that one cannot argue with the fundamental logic of an ideograph (p. 7), and terms such as *freedom* and *openness* are specifically Western values. Yet when one considers the nature of the Internet, how is it that the United States can actually "save the Internet?" It seems that because the Internet is an international network, any effort to save it would have to be an international effort. Network neutrality advocates seem to be continuing the trend of the United States to go it alone rather than work toward an international solution to the perceived problem.

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There are precedents for such international agreements. For example, the World Intellectual Property Organization (WIPO) is an international organization that works to protect intellectual property. Such an organization is necessary (in the minds of copyright advocates at least) because other countries may not value intellectual property in the same way, making it easy to circumvent intellectual property protections by simply doing so in a country that allows one to do so. It came as little surprise that Australia-based Sharman Networks, the creators of the popular Kazaa peer-to-peer file sharing program, incorporated in the island nation of Vanuatu; Vanuatu is not a member of WIPO. Technical communicators must recognize the nuances in arguments surrounding technology and how the various parts of technological systems fit together, both within one's own nation and beyond.

Network Neutrality as "Freedom"

Let us now consider the two terms most prominent in the discourse of network neutrality advocates: freedom and neutrality. In the United States, it is difficult to argue with the term *freedom* because it is such a core foundational belief. The term evokes such fundamental ideals as "*freedom* of speech," "life, *liberty*, and the pursuit of happiness," and "*freedom* of choice." Some have noted that the Internet is a site of freedom; Jewkes and Sharp (2002) argue that the Internet "can liberate its users from the usual constraints of corporality. The Internet thus gives users a freedom of expression—a freedom of *being*—quite unlike anything they have at their disposal in the physical world" (p. 3). By tying the cause of network neutrality to the ideal of freedom, proponents have evoked the idea of freedom of information, freedom of movement, and, most importantly, freedom from control. They paint the alternative to neutrality, and thus freedom, in terms of control by faceless corporate conglomerates bent only on maximizing profits.

That anyone could be an enemy of freedom may seem absurd, but the idea has gained traction in contemporary political discourse, especially as it relates to the online world. Tom Ridge, then-Secretary of Homeland Security, was quoted in the St. Louis *Post Dispatch*:

> Terrorists know that a few lines of code could ultimately wreak as much havoc as a physical attack . . . The enemies of freedom use the same techniques as hackers do . . . and we must be as diligent and determined as the hackers. (Associated Press, 2003, p. B2)

In any movement, it is important to define oneself as among those who are on the side of goodness, righteousness, and, in this case, freedom. It is just as important to define one's enemy as those evildoers who wish to deny freedom, righteousness, and justice. By placing these terms in opposition, proponents of

network neutrality, then, invite the listener to make the connection between freedom and slavery or oppression. This can be a powerful strategy both as directed at the public in general as well as in affirming one's own conviction of righteousness. Gregg (1971) notes, "By painting the enemy in dark hued imagery of vice, corruption, evil, and weakness, one may more easily convince himself of his own superior virtue and thereby gain a symbolic victory of ego-enhancement" (p. 82). Or, as Eric Hoffer succinctly argued, "Mass movements can rise and spread without belief in a God, but never without belief in a devil" (1951, p. 91).

Networks as "Neutral"

Neutrality seems somewhat at odds with American values. However, when viewed in the context of network neutrality, the term becomes synonymous with *fairness* and *equality*. Thus, the neutrality evoked is not the neutrality of a nation-state, but rather the impartiality of a judge, an imperative to be no respecter of persons. This is, in theory, an admirable proposal. However, when prodded a bit, it becomes clear that neutrality as a key term is unsustainable because the truth of the matter is that not all traffic *should* be considered equal.

To illustrate this point, consider the following scenario. In many metropolitan areas, there are carpool lanes built into the freeway system because we place a higher value on those who commute together in an effort to reduce congestion within the system. Now, let us imagine that the carpool lane is gone and that there is only one lane. Should four people commuting to work together in a sensible vehicle be seen as equal to a lone 16-year-old driving a Hummer loaded with nothing but cheap beer and pornography? We consider that the car full of people commuting to work provides more value to society as a whole and thus should be given priority. Likewise, the idea that all Internet traffic should be considered equal is ludicrous. It is difficult to assert that BitTorrent traffic, which is often used to download large quantities of copyrighted material such as movies, should be considered at the same level of importance as voice over IP traffic. Yet such is the power of a convincing narrative. If one considers the idea of neutrality as a desirable good, then he or she is less likely to consider fully the implications of the ideographs used to describe the phenomenon. The slogan becomes the whole of the argument.

Technical communicators must recognize that it is not always possible to map a particular social value from the physical world onto the digital one, especially when one ignores the implications of those values. For example, as a society, the United States places a high value on freedom of speech—so much so that it is enshrined in the First Amendment. Yet there are some assumptions that are often overlooked in the First Amendment that prove problematic in cyberspace. For example, in physical space, the speech is often connected to a person, and the person generally will claim such speech (unless he or she is a

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coward). In cyberspace, however, it is quite easy to anonymously post libelous comments. This calls attention to the nature of being (in the ontological sense) in the online world; Thomas (2002) explains that in order to try someone for a crime, a virtual presence is not enough and that "what is always needed is a body, a real body, a live body" (p. 182). Moreover, if one takes the idea of freedom of speech at face value, it is easy to ignore the fact that these posts are often not posted in public space, wherein freedom of speech is most powerfully upheld, but rather on the private property of another's server space. As such, cries of censorship that often arise when a moderator deletes an offensive posting is actually much more akin to a homeowner removing graffiti from his or her home than a government entity quashing free expression. When a technical communicator advocates for one side or another, he or she must understand the full scope of how the technology is used.

INTERNATIONAL IMPLICATIONS FOR NETWORK NEUTRALITY LEGISLATION

The Internet is only as good as the connections that make it up. By seeking network neutrality legislation, the U.S. government seems intent on establishing worldwide Internet law. Yet in some cases, this is already occurring. Braman and Roberts (2003) argue that Internet Service Providers' (ISP) Acceptable Use Policy and Terms of Service agreements are becoming a kind of de-facto law because governments worldwide are demanding more of ISPs, placing them into a regulatory role, yet allowing ISP regulations that may not be constitutional. Moreover, Nunziato (2003) provides a detailed explanation of overlooked unintended consequences of information policy in her discussion of the Internet Corporation for Assigned Names and Numbers (ICANN), arguing that ICANN policies restrict freedom of speech, specifically anonymous and/or critical speech. Nunziato also notes that ICANN's policies make it difficult to appeal to the U.S. court system because there is only a window of 10 days to lodge a court appeal before the decision is considered final and binding (p. 212).

American political wranglings concerning network neutrality often seem to overlook the international implications of such legislation. Such an attitude is understandable in light of Schiller and Miège's (1990) assertion that

> The "information society," as it now functions, takes for granted, indeed reinforces, a world economy with an international division of labor that apportions benefits to a small number of highly developed nations. These are then redistributed, also unequally, within these privileged economies. (p. 163)

Yet such a mentality must be altered in light of the increasingly wired world, even in developing nations (Borzekowski, Fobil, & Asante, 2006; Ford, 2007;

Hong & Huang, 2005; Lau, Aboulhoson, Lin, & Atkin, 2008; Mwesige, 2004; Robison & Crenshaw, 2002; Wang & Hong, 2010).

Ganley and Allgrove (2006) note that "the net neutrality debate is one which is now gaining traction in Europe" (p. 455). However, de Bijl and Peitz (2008) observe that "while there has been a heated policy debate on network neutrality in the US, it seems that Europe is lagging behind" (p. 750). Differences in regulatory structures from those found in the United States have played a part in debates over network neutrality in Europe. For example, Cave and Crocioni (2007) state that "the degree of access regulation for Internet broadband in the US is currently considerably lower than in Europe where often because of access obligations, the retail ISP is not the wholesale network provider" (p. 670). In fact, because of existing regulatory frameworks in Europe, Cave and Crocioni conclude that "the need for a 'net neutrality' provision is, at best, not proven in Europe" (p. 678). Even so, because of the interconnected nature of the Internet, the regulations forged in the United States are likely to have an impact on the rest of the world. Yet outside of the academic press, such cross-cultural implications are often ignored in the debates surrounding network neutrality.

In an international context, network neutrality is troubling from an economic point of view, especially in countries that do not have a desirable consumer base. Some content companies have decided to limit or even eliminate some markets because of financial concerns. For example, the San Diego-based company Veoh, a website for video sharing, cited a lack of prospects for profit generation, in combination with the relatively high cost of delivering video, as primary reasons behind its decision to block the access users in Africa, Asia, Latin America and Eastern Europe had to its services. As one source noted,

> "I believe in free, open communications," Dmitry Shapiro, the company's chief executive, said. "But these people are so hungry for this content. They sit and they watch and watch and watch. The problem is they are eating up bandwidth, and it's very difficult to derive revenue from it." (Stone & Helft, 2009)

For better or for worse, Internet access is still a business concern. Although it is noble to believe in universal access, there is always the question of who is willing to pay for such access. Moreover, there are other competing interests, such as national security; Winseck (2008) observes that "open networks have been traded off for national security and greater commercial control" (p. 433).

Technical communicators can play a vital role in helping the public understand the nuances of technological systems, but they seem to have largely dropped the ball on the issue of network neutrality. The debate has been framed largely as a battle between the forces of equality and oppressive corporate interests that want to clamp down on the Internet. Rather than challenge the terminology put forth by proponents of network neutrality, technical communicators have generally adopted the terms of neutr
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generally adopted the terms of neutrality. This painted opponents of network neutrality into a rhetorical corner, and it seems that technical communicators would have done well to eliminate metaphorical language and instead focus on the technical aspects of the system.

IMPLICATIONS FOR TECHNICAL COMMUNICATORS

As the case of network neutrality demonstrates, the potential for ambiguity is present even when parties share a culture and a language. When the stakeholders in a technology such as the Internet span the globe, it becomes even more important to communicate in ways that are as accurate as possible. To that end, I have outlined four strategies for technical communicators: keep it technical; choose words carefully; consider the big picture; and consider the international audience.

Strategy 1: Keep it Technical

Every technical communicator has repeatedly heard that the key is to "Keep it simple." I suggest that such a heuristic has done a disservice to the technical community. In our quest for simplicity, we have overlooked the idea of *elegant* simplicity. In other words, "simple" need not mean "dumbed down." The case of network neutrality demonstrates the dangers of using a too simple explanation for a very complex system. I propose that technical communicators should focus on keeping technical communication technical. By this, I do not mean that technical communicators should make technical issues inaccessible to the layperson. Rather, technical communicators should focus on the technology itself, divorced from the often colorful analogies used to describe them.

Perhaps technical communicators hold to the idea that technical systems are too complicated to be adequately comprehended by the layperson. As Winner (1977) notes, "One becomes accustomed to the idea that systems are too large, too complex, and too distant to permit all but experts an inside view" (p. 288). However, if technical communicators succumb to the temptation to oversimplify complex systems, they are likely to describe these systems in ways that are inaccurate. This can be particularly damaging to one's credibility, even if the desire was to interpret the system in an accessible manner.

When using technical language, technical communicators can more easily avoid language that evokes unintended consequences. For example, Lakoff and Johnson (1980) describe how many metaphors place us in a particular mindset (e.g., metaphors that elicit imagery of war). Other times, technical communicators resort to using stories as examples. However, these narratives often function in ways that were unintended by the author, especially if the reader or listener takes certain aspects of the narrative too literally. Fisher

(1984, 1987) suggests that the listener processes narratives not according to the traditional rules of logic but rather based on whether the story conforms to one's sense of narrative fidelity. In other words, the technical elements can be overshadowed by the story itself.

Strategy 2: Choose Words Carefully

The words one chooses to describe a situation can have drastic consequences. Whorf (1956) reports on many cases of fire and explosions that he was called to investigate, suggesting that the root cause was not merely accidental but also how the individuals involved constructed the situation linguistically. For example, when handling drums filled with gasoline, workers would handle them with care, but with the empty drums, they were "careless, with little repression of smoking or of tossing cigarette stubs about. Yet the 'empty' drums are perhaps the more dangerous, since they contain explosive vapor" (p. 135). Of course, the term *empty* is the real problem in this example, but Whorf points out that although they are not filled with gasoline, they are in no way empty. Whorf goes on to recount several instances in which the words individuals used to describe their situation led to dangerous situations.

Burke (1966) also suggests that the words that we use filter our perception, calling this idea "terministic screens": "Pick some particular nomenclature, some one terministic screen. . . . That you may proceed to track down the kinds of observations implicit in the terminology you have chosen, whether your choice of terms was deliberate or spontaneous" (p. 47). In the case of network neutrality, there are many alternate terms that could be used. For example, one could refer to it as "bandwidth *management*," "packet *discrimination*," or "Internet *freedom*." It is easy to see how these terms color perceptions of the topic at hand.

In addition to the ways in which terms color our perceptions, there is also the danger in abstracting such complex issues as network neutrality in non-technical ways. For example, when using the term *network neutrality*, different people have different conceptions of what the term means, yet they all think that they support the idea. Aristotle (1991 translation) alluded to such an idea in his discussion of the enthymeme, in which the hearer will supply the missing premises from commonly held opinions (pp. 186–187). Bitzer (1959) argues that because enthymemes are "formed out of premises supplied by the audience, they have the virtue of being self persuasive. Owing to the skill of the speaker, *the audience itself helps construct the proofs by which it is persuaded*" (p. 408). The ideograph of *neutrality* paints the listener into a rhetorical corner. If one seeks neutrality rather than discrimination, they will supply the rest of the argument. Describing technological systems in technical terms can often help technical communicators to avoid such linguistic quandaries.

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Strategy 3: Consider the Big Picture

Technological systems are increasingly complex and now often span the globe. What one nation does is likely to affect other nations as well. Technical communicators can no longer afford to adopt a myopic worldview that focuses only on one specific nation's interests. Of course many of these effects are difficult to predict and at times may be unintended. For this reason it is imperative that technical communicators try to remain as objective as possible about the technologies they explain.

As technology evolves, it influences society. Some scholars, such as Ellul (1964), argue that "technique elicits and conditions social, political, and economic change. It is the prime mover of all the rest, in spite of any appearance to the contrary" (p. 133). However, it is easy to forget that how we discuss technologies can sometimes be as important as the technologies themselves. In other words, technologies can be rhetorical. Black (1970) argues that rhetorical discourses imply an ideal auditor, for whom the discourse is designed and that this implied auditor can often be linked to a particular ideology (p. 112). Technical communicators must be careful to avoid creating unintended ideologies in their discourses surrounding technologies.

If technology shapes society, one must likewise consider how technical communicators describe the impact of these technologies on society. Technical communicators play a vital role in involving the public in discussions surrounding technologies. Yet Elliot (1986) suggests that "what we are seeing and what we face is a continuation of the shift away from involving people in society as political citizens of nation states towards involving them as consumption units in a corporate world" (p. 106). By involving the public in issues of public concern, technical communicators are an essential component of democratic society, and Dewey (1991) suggests that a well-informed public is vital to a well-functioning democracy.

Strategy 4: Consider the International Audience

In addition to unintended ideological suggestions, there is also the potential for miscommunication as multiple cultures engage with these technologies and the discourses surrounding them. As Thrush (1993) observes, even if the business is conducted in English, "the use of a particular grammar and vocabulary does not necessarily imply a shared value system, a uniform approach to business transactions, or a common pool of knowledge" (p. 273). Likewise, St.Amant (2005) notes that "increased access, however, does not necessarily mean increased acceptance or use of ideas. Rather, differing expectations related to design can affect the cross-cultural transfers of information" (p. 75). Language is only part of the equation. As Lipus (2006) argues, "Writing for multicultural audiences is a complex task, and knowing the culture can be as important as knowing the language" (p. 81). The potential for slippage in communication is

evident even in the most routine interpersonal interactions and therefore particularly important to remember when discussing complex technical issues.

One issue of particular importance to technical communicators is the use of ethnocentric language. Something as simple as the word "us" can reveal a particular bias. Technical communicators must consider other worldviews beyond their own, because the rest of the world is now responding. In their discussion of online forums, Starke-Meyerring, Duin, and Palvetzian (2007) note that even though technical communicators might have previously focused on creating documentation for local audiences, in the modern context of globalization,

> [T]hey must now quickly and effectively engage users from multiple and mixed backgrounds in the various global networks in which they come together. The way technical communicators engage such a forum can mean the difference between a showcase of disgruntled, dissatisfied customers and a fan forum of passionate supporters. (p. 142)

As the world becomes increasingly wired, such communication will likely become increasingly interactive.

CONCLUSION

To say that law is often created in the image of particular ideographs is unremarkable. Take, for example, such acts as the U.S. Patriot Act, the Protect Act of 2003, and the No Child Left Behind Act, which simply through their nomenclature short-circuit any possibility of dissent. After all, who would oppose patriotism? The discourse in favor of network neutrality seems to function in a similar way. By claiming the mantle of freedom and equality, proponents are able to connect the idea of network neutrality with deeply held American beliefs. Yet such arguments seem to ignore the international nature of the Internet, and by appealing mainly to universals such as freedom, obscure the nuances of the issue. Moreover, by appealing to a kind of revisionist history, they make a case for an Internet architecture that never was, and perhaps should not be, especially in light of economic concerns surrounding the service of populations that may be unwilling or unable to financially support such an endeavor.

Technical communicators have an important role in helping the public to understand the nuances in the debates over how technology should be used and regulated. If the public remains ignorant of how technology works, they will be ill-suited to make informed opinions and judgments. Moreover, technical communicators have a particularly important role in helping policymakers understand the intricacies of technology. Although it may be tempting to reduce complex issues such as network traffic to simple slogans such as net neutrality, such impulses should be resisted in the interest of robust debate over how

technology should be regulated. When slogans are employed, especially when combined with ideographs that quash dissent, deliberation is impoverished and democracy itself is at risk. After all, knowledge is a key component in deliberative democracy; James Madison's (1865) words, written in 1822, are just as applicable today:

> A popular Government, without popular information, or the means of acquiring it, is but a prologue to a farce or tragedy; or perhaps both. Knowledge will forever govern ignorance; and a people who mean to be their own governors, must arm themselves with the power which knowledge gives. (p. 276)

In the realm of technology, then, technical communicators are the guardians of information and serve as the means by which citizens can make informed judgments.

Lessig (1996) argued against the idea of a system of cyberlaw that is separate from law in the physical world because

> [T]he effects of that place [cyberspace] will never be far removed from this [physical space]. And our understanding of what that place will become is just beginning. We, here, in this world, will keep a control on the development there. As well we should. (p. 1403)

Yet law crafted through ideas and slogans is law that will certainly have unintended consequences in both the virtual and the physical realms, especially when it is built in the image of a history that never was. Thus, as we continue to watch the Internet evolve across the world, it seems that a collaborative approach that includes all of the involved parties around the world is the most prudent direction forward. Technical communicators must guide this process by explaining clearly how technology works to those who would regulate it, especially when such technologies transcend national borders. Otherwise, the detrimental effects of such regulations will be felt not only in the United States, but across the globe.

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